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AAO SYMPOSIUM ASKS:
ARE THERE TOO MANY OR TOO FEW OPTOMETRISTS?

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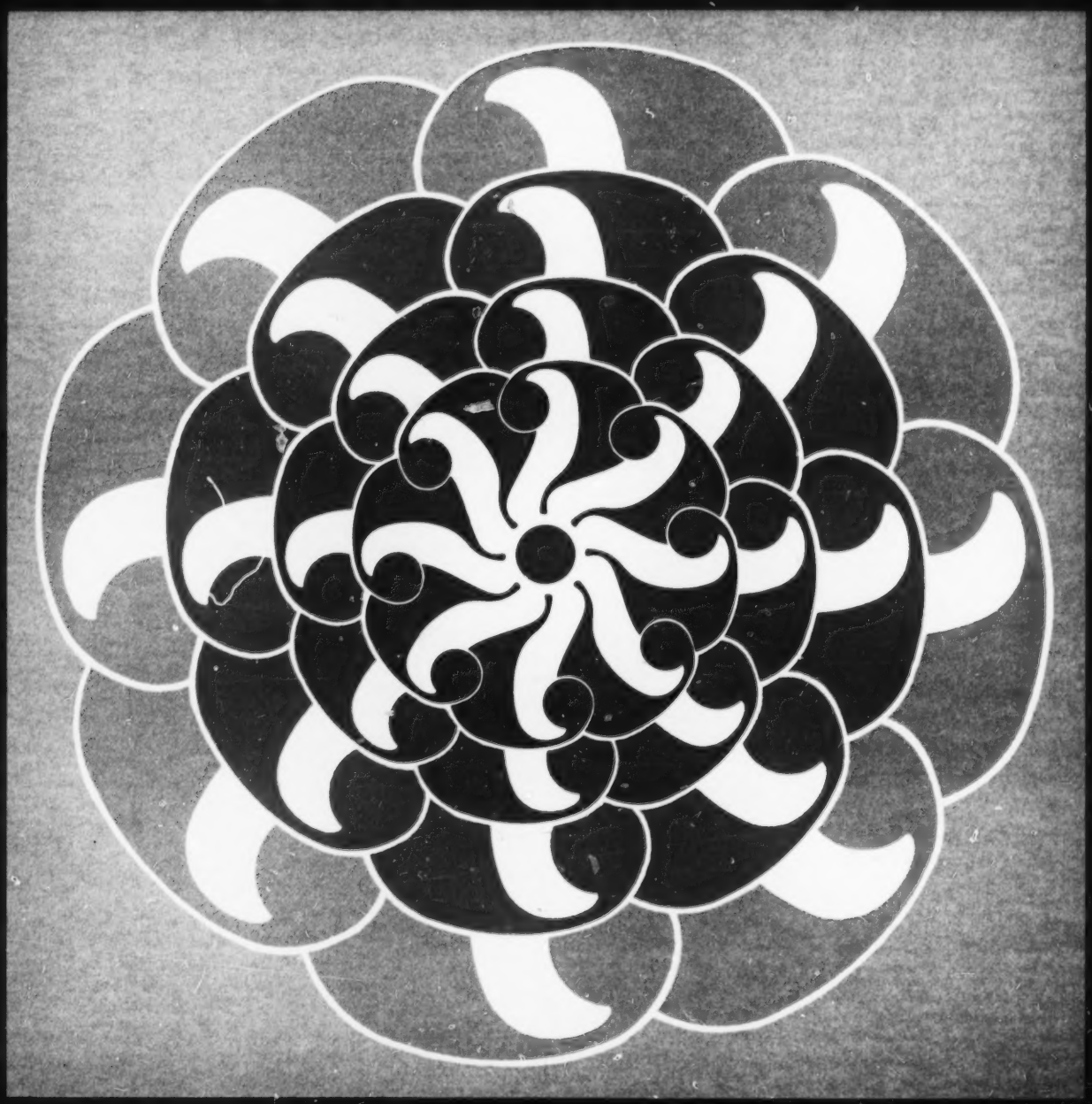

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OPTOMETRIC MANPOWER NEEDS

Implications for the Future Structure and Orientation of Optometry Schools

In December, 1986, the Section on Optometric Education of the American Academy of Optometry sponsored the symposium: "Optometric Manpower Needs—Implications for the Future Structure and Orientation of Optometry Schools." The focus of the symposium was the schools and colleges of optometry. Speakers were asked to examine how these institutions might be affected by the changes on the horizon in optometry, in health care delivery and the demography of the United States. One speaker reported on a survey of planning activities at the schools and colleges of optometry as conducted by their chief administrative officers. Another speaker examined the experiences of the dental profession and its schools in dealing with a crisis not too different than that being faced in optometry.

Special thanks to Dr. Michael Heiberger, moderator of the symposium, for his organization, enthusiasm and perseverance in overseeing this project through the publication stage.

Demographics

Henry B. Peters, O.D., M.A.

In order to place the demographical information related to optometric education in proper perspective for planning, I propose to review the material from three particular perspectives: changes in the national population, changes within the health professions and changes within optometry. Unfortunately, the information sources readily available are not directly comparable, encompassing different time periods, different methodologies and certainly different interpretations. In spite of these problems, however, it is possible to draw some general conclusions of value to this exercise.

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Changes in the National Population

The national population continues to increase (1984 = 236 million) and is projected to continue (1990 = 250 million, 2000 = 268 million).[1] But the increase is not uniform in regard to age, race or geography. While the number of births continues to rise, the number of young adults (ages 21-26: the target population for students of optometry) continues its 15 year decline. This age group (21-26) will not begin to increase until after 1995. The decline in this age group from 1983 to 1995 is expected to approach 26%.

The other important change in the age distribution of our population is the rapid increase in the number of persons over 65 years of age, particularly striking for those over 75. Both age groups are expected to increase from the cur-

rent 12% to 16% of the population by the year 2000, with further increases in the years beyond.[1] Of importance to the practicing optometrist, more than half the eyewear population are presbyopes (65 million) and this is expected to increase to 130 million by the year 2000.

Women continue to account for more of the population (52%) and have a longer life expectancy (78.3 years at birth) than males (71.0 years at birth), though the gap appears to be closing.

The Black population grew faster in the last decade than the general population and currently constitutes 12 percent of the population (28 million). The Spanish-origin population numbered about 16 million. About 53 percent of the growth in the Spanish population (10%) since the census of 1980 is attributable to immigration.

The changes in geographic distribution of the population between 1980 and 1983 show that 94% of the population increase was in the South and Southwest. The largest numerical gain was in California (1.5 million) while four states lost population: Indiana, Iowa, Michigan and Ohio. Three states accounted for 53% of the population increase: California, Texas and Florida. But again the changes were not uniformly distributed. Alabama, Mississippi, Arkansas and Tennessee showed population gains substantially below the national average. Much of this change was due to migration. Sixteen percent of the population changed address in one year; one-fifth moved to a different state.

A reversal has taken place since 1980 in the growth rates of metropolitan versus non-metropolitan areas. For the first time in this century, non-metropolitan counties grew faster than metropolitan areas, though major metropolitan areas continued to grow and three out of four Americans lived in cities of 50,000 or more population.[1]

The nation's educational level continues to rise. For example, 87 percent of 25- to 34-year-olds in 1984 were high school graduates, 23 percent of men and 21 percent of women in this age group were college graduates—more than doubling the level of education since World War II. The change has been particularly striking for women. In 1970 women represented 40% of college graduates for that year while in 1980 they represented about 50% of college graduates. Of importance to optometric education, the number of bachelor's degrees in life sciences awarded has decreased since 1977. There were 35,743 such degrees awarded in 1971. In 1977, the peak year, there were 53,605 awarded. The number has declined steadily to 39,982 in 1983, the last year for which statistics are available.[2]

Overall, minority enrollment in higher education increased 6 percent between 1980 and 1984, because of increases in Hispanic and Asian enrollments. During this period Hispanic enrollment increased by 12 percent and Asian/Pacific Islander enrollments increased 34 percent. Both Blacks and American Indians/Alaskan Natives experienced declines (3 percent and 1 percent, respectively). Blacks are losing ground at almost all levels of higher education. Between 1980 and 1984, Black undergraduate enrollment declined by 4 percent, while Black enrollment at the graduate level fell 12 percent. During this period Asian/Pacific Islanders enrolled at the first professional level increased 51 percent.[3]

Clearly these shifts in the demographic factors of population, age distribution, sex, race, geographic distribution, education and minority representation have had, and will continue to have, significant influence on the future of optometric education.

Changes Within the Health Professions

In the area of health manpower production, the most significant factor in these monumental changes has been the shifts in national health policy and particularly its focus on health manpower. Beginning in 1963 with the enactment of the Health Professions Educational Assistance Act, Congress acknowledged a manifest shortage in the nation's supply of physicians and other allied health professions. Through the years since, Congress has provided a succession of enactments designed to increase the number of health professionals: student assistance, special projects, construction grants, capitation, minority recruitment and more. In the beginning these grants were designed to increase numbers, but as the capacity was increased other issues of specialization, geographic distribution, minority participation and others were addressed. The principal focus was on physician manpower. By 1984 the number of physicians per 100,000 population had increased from 156 in 1965 to 210, an increase of 35.1 percent, with a projection to 235 in 1990 and 260 by the year 2000.

The Graduate Medical Education National Advisory Committee (GMENAC) changed the perception of policy makers and indicated a surplus of physicians (compared to need) of 70,000 by 1990 and 145,000 by the year 2000. The Department of Health and Human Services, based on a different methodology, predicted a surplus of 35,300 physicians in 1990 and 51,800 in 2000. While the numbers differ the conclusions are the same. Already in the pipeline of education are a surplus of physicians. Further studies reported by Dr. Alvin Tarlov, chairman of GMENAC, reported in 1985 that the GMENAC predictions were on target and if anything may have predicted surpluses that were too low.[4]

The Reagan administration, as part of its effort to reduce the budget deficit, has initiated policy changes to reduce the federal support for health manpower development. Not all of these initiatives have been enacted into law but it is apparent that efforts will continue to: reduce the entrants of foreign medical graduates, reduce the graduate medical education support in Medicare and Medicaid, reduce the trend toward specialization and reduce or eliminate student financial aid—capitation is already gone. This scenario has not yet played out but optometric educators should be aware of and prepared for these changes.

Natural forces have an impact on the graduates of medical schools. The number of graduates peaked at 18,486 in 1985 and is predicted to decline to 17,946 in 1990 and to 17,464 by 2000 without the federal interventions mentioned above.[5] Some of these natural forces are changes in the attitudes of students toward health profession careers,[3] changes in the perceived environment and career opportunities in health services and strong competition from business and engineering.

The demographics of dentistry are

particularly instructive. In 1950 there were 49.8 dentists per 100,000 population. While the number of dentists increased the population increased faster and by 1965 there were only 46.5 dentists per 100,000. The increases in dental education created by the Health Professions Educational Assistance Act and subsequent federal support allowed that ratio to increase to 56.3 per 100,000 in 1984. But dentistry has lost some of its appeal and applicants are now down. In one decade it has changed from enrolling 37 percent of dental school applicants to enrolling 78 percent of applicants. In 1975 there were 15,734 applicants, 5,763 students were accepted, and in 1985 there were 6,216 applicants of whom 4,843 were accepted. This year, first year enrollment decreased to 4,555. Graduates are predicted to decline to year 2000.[6]

Dentistry too has seen an increase in the number of women and minority students although the number of Black students has remained constant for the last decade. The geographic distribution of dentists is quite similar to optometry, highest in the Northeast and West and lowest in the South.[5]

Pharmacy is a profession in transition. In 1966 more than 67 percent of pharmacists either owned or worked in independent establishments. By 1984 it is estimated that 30 percent of pharmacists were in independent establishments, and more than 33 percent in chain store pharmacies, with the balance in institutions.[5]

Pharmacy has not established a common educational and degree program and that continues to provoke controversy in the profession. Enrollment peaked in 1975-76 and had declined 25 percent by 1984-85 but appears to have leveled off. Projections by HHS indicate that current enrollment must be maintained in order to maintain the pharmacist-to-population ratio and equal the estimate of need.

Pharmacy schools are currently enrolling women at an increasing rate, 54 percent in 1984, but studies of productivity indicate that a higher proportion of women practice part-time. The proportion of minority students has remained relatively constant for the last decade at about 16 percent but is not expected to increase.

Changes Within Optometry

Optometry is unique among the health professions in that the ratio of optometrists per 100,000 population has remained relatively stable for two decades. While the number of active optometrists has increased during this period the growth rate has only recently begun to outpace that of the population. The ratio of active optometrists per 100,000 population increased from 8.9 in 1970 to 9.2 in 1975 and to 9.9 per 100,000 in 1984.[5] Note that this later figure is an estimate and will be validated only by the 1990 census. Note too that the American Optometric Association National Plan for New Academic Facilities and Programs for Optometric Educaton, 1985,[9] established a target ratio for optometrists of 12 per 100,000. With the present capacity of the 15 U.S. schools and colleges of optometry this ratio will not be achieved by the year 2000.

The bimodal age distribution of optometrists[7,8] indicates that a greater-than-average number of optometrists will be leaving active practice in the near future due to death, disability or retirement. If this prediction is correct it would tend to reduce the ratio of optometrist-to-population in the period 1990-to-1995, or at least slow its increase. The effects of the G.I. Bill of the 1950s and the increase in the numbers of graduates in the mid 1970s and subsequent years gave rise to the bimodal distribution still evident. But the increasing number of new graduates has caused the median age of optometrists to fall from 48 years in 1980 to 42 years in 1984.

Table I
Applicants and Matriculants by Year 1980-1985

	OCAT Takers			Matriculants			No. of Schools in Continental U.S.
	Total	New	Repeat	Total	Male	Female	
1980	2,983	2,114	869	1,174	877	297	13
1981	2,186	1,677	509	1,168	846	322	15
1982	2,168	1,734	434	1,119	791	328	15
1983	2,289	1,914	375	1,187	781	406	15
1984	2,198	1,800	398	1,177	769	408	15
1985	2,314	N/A	N/A	1,154	704	450	15
1975*	4,227	3,200	1,027				

*Peak year for applicants

Data from OCAT reports, reports of the COE and ASCO

Table II
Optometrists Per 100,000 Population 1984 by Quartile and Rank Order—50 States and District of Columbia

Lowest 25%			Highest 25%		
51	New Jersey	5.7	1	Maine	16.4
50	Georgia	5.8	2	Massachusetts	15.8
49	Louisiana	5.8	3	Montana	15.6
48	Texas	6.9	4	Oregon	13.5
47	Mississippi	7.0	5	Indiana	13.4
46	Maryland	7.3	6	South Dakota	13.3
45	North Carolina	7.5	7	Rhode Island	13.2
44	Alabama	7.6	8	Idaho	12.8
43	Virginia	7.8	9	California	12.7
42	South Carolina	8.0	10	Wisconsin	12.5
41	Delaware	8.1	11	Iowa	12.5
40	Florida	8.4	12	North Dakota	12.3
39	New York	8.4	13	Wyoming	12.3

Of more concern to the schools of optometry is the experience with applicants and matriculants. Table I shows that those taking the Optometric College Admissions Test (OCAT) declined from a peak of 4,227 in 1975-76 to a low in 1982-83 of 2,168. But the number of repeaters taking the OCAT declined steadily from 1,027 in 1975-76 to 398 in 1984-85.

The second point of interest is that while there is some small variability, the number of students matriculating to the first-year of the professional programs (entering class size) has remained relatively constant (varying from 1,119 in 1982 to 1,187 in 1983) during the period since 1980. But the number of male matriculants has declined steadily from 877 in 1980 to 704 in 1985, from 75 percent to 61 percent of the entering class, a decrease of 20 percent, while female matriculants have increased steadily from 297 in 1980 to 450 in 1985, an increase of 52 percent or nearly 40 percent of the entering class.

The number of women active in optometry constituted a small percentage (8%) of presently practicing optometrists in 1984 but is predicted to increase their proportion to 23 percent by the year 2000.

The record of optometry schools in minority recruitment is certainly disappointing. While the total number of minority students doubled in the last 12 years, the number and proportion remain very low for some minority groups. While enrollment of Asian-American students increased from 117 to 293 during this period, Black students increased only from 32 to 88, those with Spanish surnames from 30 to 123, and American Indians from 2 to 18.[5]

The substantial differences in the geographic distribution of optometrists persists. The ratio of optometrists per 100,000 population in 1984 ranged from a high of 11.8 in the West to a low of 8.0 in the South. The ratio for the Midwest is 11.1 and for the Northeast is 9.9.[5] All of the states in the lowest quartile (25 percent) are in the Southeast except New York and New Jersey. The state with the highest ratio, Maine (16.4), has nearly three times as many optometrists per 100,000 population as the state with the lowest ratio, New Jersey (5.7).

Statistics in 1980 showed that Mississippi ranked last (51, now 47th) and Alabama was 50th (now 44th) of the fifty states and the District of Columbia. States should be attuned to these danger signals: optometry is in danger in those states where (1) there are fewer than two optometrists for each ophthalmologist, (2) there are fewer than one student applicant per 100,000 population per year, and (3) there are fewer than 10 practicing optometrists per 100,000 population. There are currently twelve states that meet all three criteria.

Finally optometry does not exist in a vacuum. Ophthalmology services overlap significantly with those provided by optometrists. The number of ophthalmologists has increased rapidly since 1970 when the ratio was 2.6 per 100,000, attained 5.8 per 100,000 in 1984 and is projected to reach 6.8 per 100,000 by the year 2000. GMENAC[10] predicted a surplus of 4,700 ophthalmologists (total surplus of 70,000 physicians) by 1990 and a surplus of twice that many by the year 2000, based on its detailed study of "adjusted need." While strenuously contested by the American Academy of Ophthalmology, which argued a serious shortage of ophthalmologists in both 1990 and 2000,[11,12] other ophthalmologists[13,14] tended to support the GMENAC report. Tarlov, chairman of GMENAC, argues that the surplus may be understated by as much as 18%,[4] if full consideration is given to the manpower utilization in the growing number of HMOs. With the increasing interest of federal policy makers in the excess costs of unnecessary cataract surgery and the general concern for the costs of excess specialization, there appears to be an opportunity for optometry to exploit its historical primary care role in eye care and use its political acumen to foster a reduction in federally funded ophthalmological residencies. I believe such an effort is in the public interest. Lending strength to such an optometric argument are the factors of (1) developing role in primary care in HMOs, IPAs, (2) expanding scope in the diagnosis and treatment of eye disorders using new technology as well as drugs, (3) rapidly developing net-working and co-management centers, (4) inclusion in Medicare and other prepayment programs, and (5) the proven cost effectiveness of optometric services.

"There would seem to be two policy choices—governmental intervention to set limits on the number of physicians and non-physicians being trained, and an effort on the part of the medical professions and other medical providers to limit their numbers" Trobe.[12] Written in 1982, there is no evidence in 1987 that ophthalmology has made any attempt to restrict its accelerating growth and the predicted surplus. Government intervention should be supported by optometry.

The preceding material supports the position that current optometric manpower development is conservative, consistent with population growth and attrition, and, except for geographic maldistribution, should be continued at the present level. To do so the various professional organizations and schools of optometry will need to continue a high level of student recruitment activity. □

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S C E N A R I O A

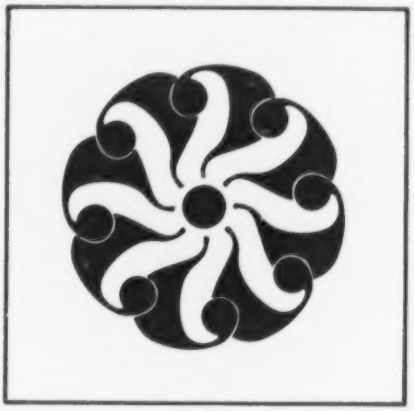
The Need to Increase or Maintain Enrollment at Current Levels

David W. Davidson, O.D., M.S.

Introduction

Every so often, at least once every decade, the optometry profession needs to reexamine its present and future manpower needs. This periodic reexamination of manpower is necessary for a variety of reasons. Of primary concern is the fact that the profession is constantly changing. The profession continues to experience significant changes in terms of scope of practice, modes of practice, patient population shifts and advancing technology. In addition, individual practitioners feel the influence of these changes in their own practices, and when demand for a practitioner's services begins to decline, that practitioner will likely begin to question local manpower needs. Local optometric societies become concerned with apparent growth in the number of practicing optometrists and ophthalmologists, especially if these increases are tied to lowered demand for services from established practitioners. Individual practitioners and leaders within the profession then begin to wonder if the schools and colleges aren't perhaps turning out more new graduates than is desirable. Finally the profession, in compliance with requests from its constituents decides to undertake another study of optometric manpower.

The question of optometric manpower is indeed a complex one. It requires careful study of population demographics and trends, changes in scope of practice, calculations of the time required to complete various types of examinations, modes of practice, inter-professional interactions, and a host of other considerations. Enormous amounts of data are collected and analyzed in order to determine one simple figure . . . the ideal number of optometrists per 100,000 population. From that figure one can then determine the number of new practitioners that would need to be graduated each year from the schools and colleges of optometry in order to arrive at the ideal optometrist-to-population ratio in a given length of time. The simplicity of the outcome is very misleading. It suggests the result can be determined with very little effort. There are also considerable regional variations in manpower, and manpower needs, and these differences,. among others, make the outcome suspect at best. Nonetheless, the time has come to take another look at the future manpower needs within the optometric profession. Hopefully this symposium, and the discussion it generates, will help individuals better understand the complexities inherent in manpower studies, and become more knowledgeable and respectful of the many variables that must be considered in a determination of future manpower needs in optometry.



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Background

There are 15 schools and colleges of optometry in the continental United States. In addition, two Canadian schools and one school in Puerto Rico constitute the 18 member institutions of the Association of Schools and Colleges of Optometry. Of the 15 optometry schools in the continental United States, nine are situated as components of state-supported colleges or universities, and six exist as free-standing, independent institutions. Two of the mainland schools (and also, the school in Puerto Rico) were established in 1979-1980. There have been no new schools or colleges of optometry mandated into existence since 1980.

The schools and colleges of optometry in the United States currently are graduating approximately 1100 new ODs each year[1]. However, this figure has fluctuated dramatically over the years. Figure 1 shows the number of graduates from schools and colleges of optometry each year from 1942 until 1985.

These data demonstrate that the number of graduates peaked in the late 1940s and early 1950s but then declined steadily for twelve years. Optometry graduates decreased from a peak of 1,934 graduates in 1949 to a low of 319 in 1961. The decade from 1955 through 1965 was the leanest in the history of optometric education with an average of only 350 graduates per

Figure 1
NUMBER OF GRADUATES 1942-1985

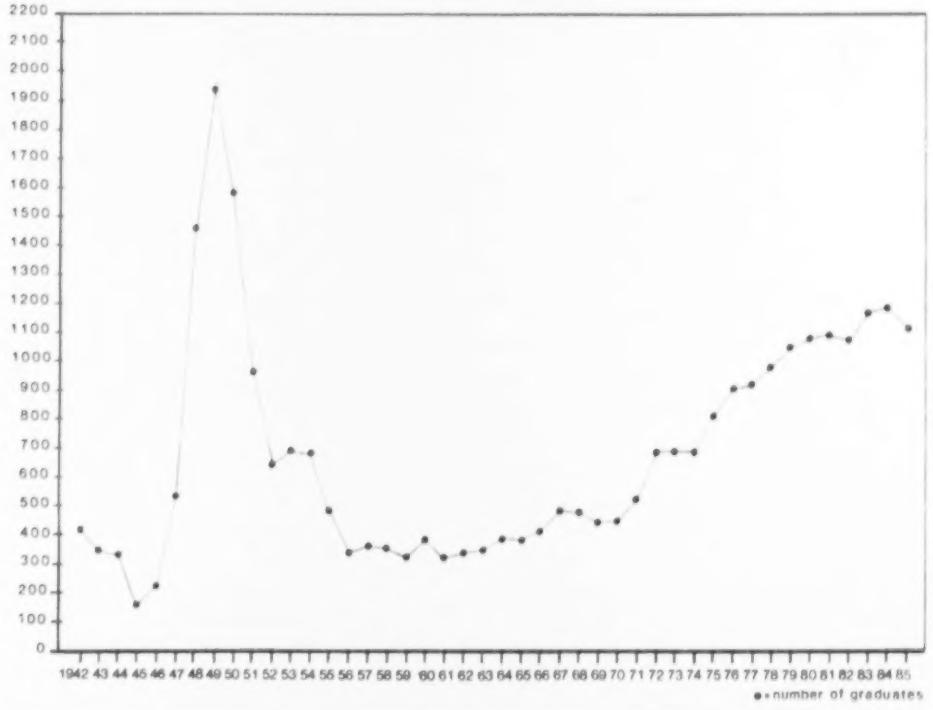


Figure 2
COMPARISON OF ENTERING FIRST YEAR STUDENTS TO GRADUATES

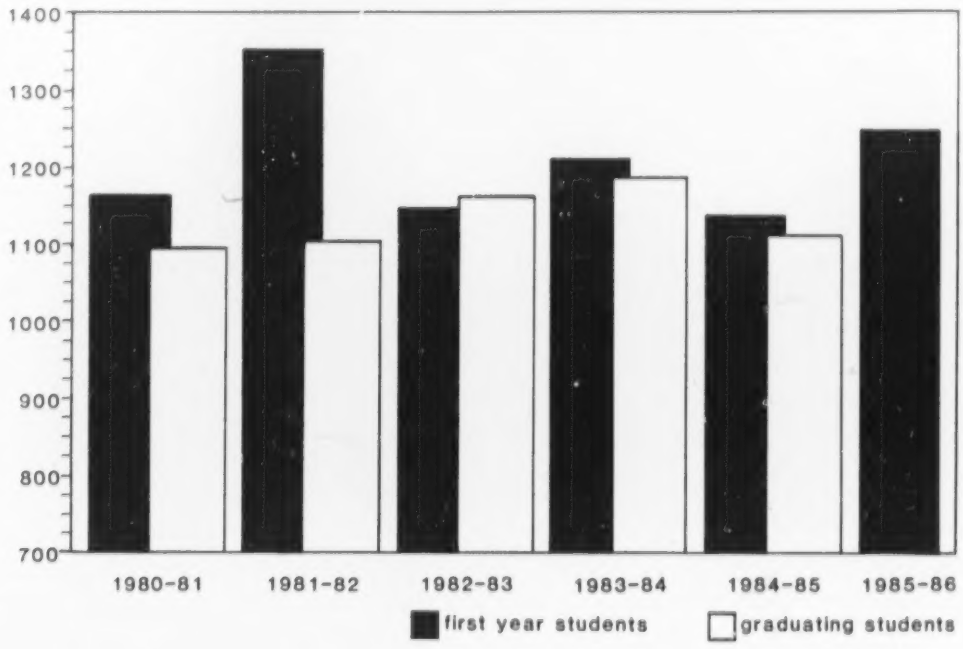


Table 1
COMPARISON OF OPTOMETRIC AND OPHTHALMOLOGIC MANPOWER
1950 vs. 1980

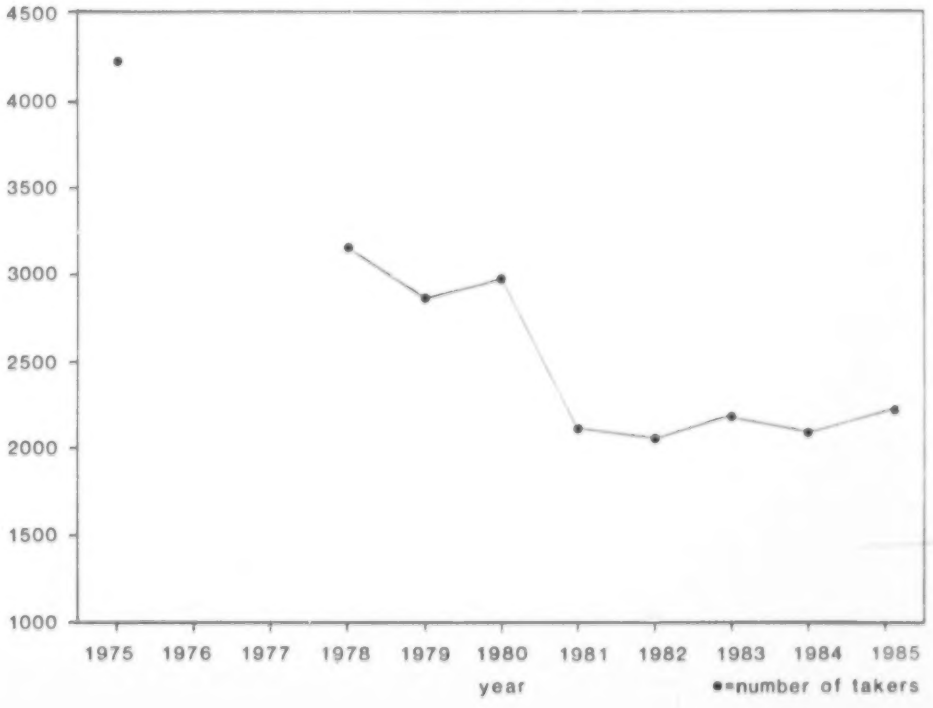
	1950	1980	% Change
Number of ODs	19724	22799	+ 15.6%
Number of MDs	3723	9926	+ 166.6%
ODs/100 k pop	11.8	10.4	- 11.0%
MDs/100 k pop	2.4	4.6	+ 92.0%
OD:MD ratio	5:1	2.3:1	- 54.0%

year. This downward trend was reversed in the late 60s and 70s as the result of federal capitation funding that made it attractive for new schools and colleges to come into existence, and for existing schools to enroll greater numbers of students. As the result of federal capitation funding, and also partly as the result of improved financial assistance to professional students through government subsidized, low interest rate loans, the number of optometry graduates increased steadily from 1961 until 1984. 1985 saw the first decline in the number of optometry graduates from U.S. schools in 23 years.[2] Figure 2 compares number of graduates to new first year enrollments. From these data we can predict that the number of new graduates each year will remain fairly constant, at least through 1989.

While the number of new graduates has been rising gradually through the 1970s and early 1980s, the number of applicants to the schools and colleges has declined dramatically during this same time period.[3] The Association of Schools and Colleges of Optometry has only recently begun collecting accurate information on numbers of unduplicated applicants. Therefore, figures on the numbers of Optometry College Admissions Test takers have been used to reflect the trend in applicants from one year to the next. Figure 3 shows the number of OCAT takers for the years 1978-1985. 1975 was the peak year for numbers of applicants and it is included in the figure for comparative purposes.

As can be seen from Figure 3, there was a precipitous drop in applicants from 1975 through 1981, but the applicant pool has remained relatively constant since 1981. It is important to keep in mind that the entering class sizes remained relatively constant through the years when the pool of applicants was declining and has remained constant ever since. This means that the applicant-to-admission ratio has decreased significantly. In other words, the schools and colleges are digging deeper into the applicant pool in order to fill their first year classes. In 1975, the applicant-to-admission ratio (based on OCAT takers) was 4.3:1. That is, there were approximately 4.3 applicants nation-wide for each student admitted. By 1981, that figure had dropped to 1.98:1, and has only gone back up to slightly over 2.0:1 since 1981. More recent data based on a careful analysis of unduplicated applicants indicate the applicant-to-admit ratio for the 1986 applicant pool was

Figure 3
NUMBER OF OCAT TAKERS



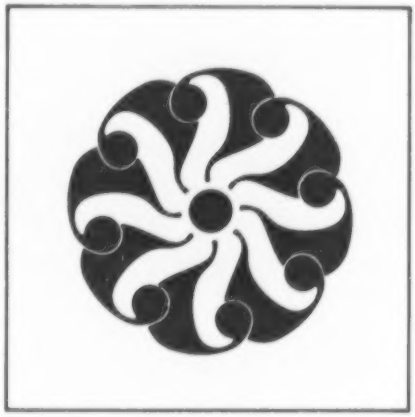
1.6:1.[4] One has to wonder how this decline in the applicant-to-admission ratio has affected the quality of entering students. No clear studies have been conducted to answer this question, but some preliminary data suggest a decrease in grade point averages and OCAT scores for entering students during this same time period.[5]

Optometric manpower can be shown to have followed these trends in enrollment in schools and colleges of optometry. Optometry in the '60s and '70s was practiced largely by the individuals who were trained in the "post World War II bulge." Numerous studies were conducted during the '70s that demonstrated that, as this large population of aging optometrists grew older, attrition from retirement, disability and death would outstrip recent graduates, and there would be a serious decline in manpower.[6,7,8] Indeed, in that same time period, there were steady declines in the optometrist to population ratio. The OD-to-population ratio declined from 11.9 ODs per 100,000 population in 1961 to 8.9 ODs per 100,000 population in 1970.[9] However, since that time there have been slow but steady increases in this ratio. The ratio of active optometrists per 100,000 population increased from 8.9 in 1970 to 9.2 in 1975 and to 9.9 per 100,000 in 1984. This gradual increase is expected to continue through the turn of the century.[10] There were 23,600 active optometrists in 1984. Health care planners are currently projecting 29,700 active optometrists by the turn of the century bringing the optometrist-to-population ratio up from the 1984 figure of 9.9 optometrists per 100,000 population to 11.1 per 100,000 population by the year 2000. It is worth noting that optometric manpower projections to the year 2000 remain below the 1960 optometrist to population ratio, and are considerably below the ideal ratio recommended by the American Optometric Association.[11,12]

In determining manpower needs for the delivery of primary eyecare, one has to look at ophthalmological as well as optometric manpower. There have been dramatic increases in ophthalmologic manpower in the last three decades.[13] In 1950 there were 3,723 ophthalmologists practicing in the United States, or 2.4 ophthalmologists per 100,000 population. By 1980 their numbers had increased to 9,926 or 4.6 ophthalmologists per 100,000 population. Another useful way to look at this 30-year shift in manpower is to look at the OD/MD ratio. In 1950 there were approximately five optometrists for every ophthalmologist. That number decreased to 2.3 optometrists for every ophthalmologist by 1980. The optometrist-to-population ratio for the 30-year period decreased 11% while the ophthalmologist-to-population ratio over the same time period increased 92%. These data are summarized in Table 1.

Optometric Student Recruitment

This portion of the discussion has been designed to further explain and delineate the need for aggressive optometric student recruitment. Several "non-traditional" recruitment options will be considered. Among these, particular attention will be paid to the need for minority student recruitment. Blacks, Hispanics and Native American Indians are very poorly represented in optometry in proportion to their numbers in the general population. Some information is offered in an attempt to understand why these minority groups are not better represented in the profession, and to describe the identifiable obstacles that impede access to the profession for minority individuals. Also, an attempt is made to identify those obstacles minority individuals face when considering a doctoral level health profession, with special emphasis on those problems that are unique to the optometric profession.



As mentioned previously, there are approximately 24,000 optometrists currently in practice in the United States. Approximately one-half of these individuals are in solo private practice. However, an increasing number of optometrists are seeking group practice opportunities, or practice in clinical settings, and most people would agree that the trend for the foreseeable future is away from the solo private practice of optometry. Another recent trend has been for greater numbers of optometric practices to be located in suburban communities with fewer and fewer practices to be found in downtown areas and urban inner cities.[14]

Blacks, Hispanics and Native American Indians comprise 2% of currently licensed optometrists.[15] That figure has not changed significantly in recent years; however, there is a small percentage increase in students from these minority groups currently enrolled in schools and colleges of optometry.[16] Access to federal financial assistance through Special Health Career Opportunity Grants (SHCOG), and more recently Health Career Opportunity Program Grants (HCOP), has resulted in increasing the number of minority students enrolled in schools and colleges of optometry. However, most people involved in optometric minority student recruitment would agree that the outcome has been rather disappointing when compared to expectations. There are several persistent obstacles which limit the size of the minority applicant pool to schools and colleges of optometry, and impede access for those that are applying. Many of these obstacles affect virtually all potential applicants (minority and non-minority), and are viewed by many as lowering the applicants' motivation for a career in optometry, or impeding their access. Other obstacles are unique to minority applicants. Some of the identifiable reasons for the declining applicant pool are as follows:

1. The lure of medicine.

The vast majority of students (including minority students) aspiring to a doctoral level health profession have medicine as a goal. This is the result of medicine's long-standing prominence in the health care field, its abundance of role models, medicine's widely recognized income earning potential, parental pressure, and media visibility. Furthermore, health advisors at local undergraduate colleges and universities usually have emphasized medicine in preference to other options in the health care field when well qualified students on their campus have expressed an interest in pursuing a doctoral-level career in one of the health professions.

There is an abundance of career awareness literature promoting careers in medicine; "pre-med" clubs are active on most college campuses; and the general public receives a constant barrage of their senses glamorizing medicine through popular television programming. Many youngsters, when asked

what choices exist if they want to become a "doctor," can identify only two choices: medicine and dentistry. Lastly, many medical schools are far better endowed with scholarship funds to further lure talented students to their institution as compared to the rather low number of scholarships available for talented optometry students.

2. Escalating costs of optometric education.

Recent studies show optometry students are graduating with an average indebtedness of $25,000, with some students, particularly those attending private institutions, developing an educational indebtedness in excess of $50,000.[16] This necessity for very high indebtedness has caused many potential applicants to consider other options. Escalating educational costs have made it especially difficult to recruit minority and economically disadvantaged students whose backgrounds and family upbringing result in these students being extremely reluctant to incur heavy indebtedness.

3. Difficulty in securing adequate financial assistance.

This problem serves to exacerbate the problem described previously. There are increasing restrictions being placed on federally sponsored financial aid programs for college students and in particular aid for students in health professional educational programs. With tuition and fees continuing to escalate, and students encountering increasing difficulty in securing adequate financial aid to meet their educational expenses, it has been predicted by some health planners that doctoral-level health professional education will become a reality only for the affluent.

4. Insufficient supply of appropriate optometric role models for minority students to emulate.

There are very few minority optometrists in private practice; consequently most minority youth have never met a minority optometrist. Furthermore, as stated earlier, fewer and fewer optometrists are choosing to practice in the urban inner city and consequently, there is reduced access to optometric vision care for residents of these communities. This trend also has reduced the likelihood that a minority youth will obtain professional optometric vision care and as a consequence of optometric interaction, develop the desire to become an optometrist. It is quite predictable that, under prevailing conditions, minority youth are not likely to aspire to careers in optometry since there is so little opportunity for interaction with an impressive optometric role model.

5. A blemish in the glamour

In the last few years, some attitudinal changes within our society have adversely affected the recruitment of many students (minority and non-minority) into any of the health professions. The average consumer of health care no longer views the physician with the esteem recognized from an earlier era. With the advent of automation in health care, heavy use of para-professionals, and the disappearance of "house calls," doctors are no longer perceived as being the compassionate healers they once were. Health care costs have escalated at astronomical rates and physician wealth combined with a commercial emphasis in the health care industry have added to the decline of the doctor's esteemed public image.

Most recently, medical careers have received some additional bad press. This has come in two forms:

a. A glut of physicians.

The first indication of a physician manpower surplus came out of the Graduate Medical Education National Advisory Committee Report of 1980 in which it was reported that the United States was entering into an era in which there would be an oversupply of physicians. Manpower projections indicated that by 1990, there would be a surplus of physicians, particularly in the surgical specialties of medicine.[17] The press picked up on this report and the news was widely spread that the "physician glut" would make future medical careers less desirable due to increasing competition. The public interpreted this to mean a decline in the desirability of any doctoral level health career, including optometry (in spite of the fact that optometry was not identified in the GMENAC report as entering into an era of surplus manpower).

b. Alternative delivery modes

Adding to the negative public image was the dawning of alternative modes of health care delivery such as health maintenance organizations. Many leaders in the health care industry were expressing great concern that the demise of the "private practitioner" would act to greatly compromise the quality of health care in the United States. This demise was blamed on a stifling of the free enterprise system, and a consequent lowering of the motivation toward a health career for some potential applicants because of fears of a decline in physician income earning potential.

Recent corporate and commercial emphasis in health care has been another cause for potential applicants seriously reevaluating their interest in health careers. Many applicants over the years have expressed the desire to "be their own boss" as one of the reasons they were pursuing a health career. However, HMOs and the corporate incursion into health care have increased the number of physicians and other providers of health care who serve their patients as salaried employees. This trend of optometrists and other doctors delivering health care as corporate employees has been a major deterrent to considering a health career for the potential applicant with an entrepreneurial spirit.

6. Optometrists are showing a decline in their traditional enthusiasm toward the profession.

Over the years, numerous studies identified the practicing optometrist as the profession's best recruiter. Questionnaires filled out as applicants took their optometry admissions test have traditionally indicated that over half of the test takers were inspired to pursue a career in optometry as the result of influence from a practicing optometrist.[18] However, recently, the number of applicants indicating that they were influenced to pursue a career in optometry as the result of interaction with an optometrist is declining substantially. Many applicants, during their on-site interviews conducted as part of the formal application process, indicated that an optometrist had actually advised them against pursuing a career in optometry. The optometrists' declining enthusiasm to recruit their talented young patients into the profession poses a serious threat for the future of optometric student recruitment, and is a serious concern for leaders in the optometric profession.

7. Increasing popularity of careers outside the health care field.

Adding to the decline in popularity of the health professions has been a recent increase in interest in career opportunities outside health care. This is because many of these alternative career opportunities have very competitive entry-level incomes requiring fewer years of training as compared to that required in

optometry or other doctoral-level health professions. Some examples of alternative career options which have enjoyed increasing popularity in recent years include computer science, engineering, marketing and management.

8. The bust of the baby boom.

A gradual but constant decline in the birth rate over the last two decades has further fueled the declining applicant pool. Population statisticians have demonstrated a decline in the number of high school graduates—a number that will continue to decline through the turn of the century.[19]

Other "Non-Traditional" Optometric Student Recruitment Possibilities:

1. Optometrists educated in foreign countries

Each year the admissions officers of the U.S. schools and colleges of optometry receive a small number of requests for special programs from optometrists who received their optometric education in foreign countries. These requests have been a dilemma for most of the U.S. schools and colleges. The definition and scope of practice in optometry is quite varied from one country to another, and the education optometry students receive in these different countries also varies considerably. Most of the U.S. optometry programs find it very difficult to design a special program around the varied backgrounds of foreign trained optometrists. Most schools ultimately decline these requests for admission. It also is worth noting that the pool of optometrists trained in foreign countries wanting to practice in the United States is sufficiently small that it doesn't represent a significant recruitment potential. There does not appear to be either a need or motivation at this time to increase this pool of potential applicants.

2. Accelerated, decelerated and part-time programs

Every school and college of optometry in the United States and Canada currently requires four years' study beyond undergraduate preparation in order for an individual to earn the doctor of optometry degree. However, many programs have specially designed curricula permitting selected individuals the ability to complete the equivalent of that four year professional program in fewer or greater than four calendar years. Those students who are selected for programs of modified length fall into one of the following categories:

a. Students who have PhDs or similar advanced degrees in related disciplines. Some schools have designed specific curricula to permit students in this category to complete their optometric education in two calendar years. Those schools that have modified curricula for this purpose actively recruit students with advanced degrees.

b. Students who find themselves in academic difficulty as a result of the very rigorous nature of the traditional four-year optometric curriculum. Most schools permit students in academic difficulty, who show promise of successfully completing the curriculum if placed on a reduced academic load, to be placed into modified curricula where they take the first academic year over two years, or complete the first two academic years over the span of three years. These students will normally take five calendar years to complete the four-year professional curriculum. These modified programs are not widely advertised, and students are not guided into these "reduced load" five-year pathways until they have demonstrated some significant degree of difficulty in their ability to handle the normal four-year course load.

c. A small number of students at a few schools and colleges, at the time they receive admission, are permitted to pursue the professional curriculum on a part-time basis while they continue working, or are pursuing another degree simultaneously. The length of time to graduation varies but can be from five to seven years or even occasionally longer than seven years. This option holds some appeal for selected applicants, and could prove to be a useful recruitment vehicle for certain students who otherwise would not be able to pursue an optometric education. There are several rather obvious reasons why an increasing number of potential applicants might prefer to pursue an optometric education on a part-time basis:

As the cost of optometric education continues to escalate, and financial aid becomes less available, more and more applicants may find it desirable, or even necessary, to work a regular job while attending school, in order to afford the high cost of an optometric education.

An increasing number of working adults are finding it desirable to consider alternative career goals. This is due to our nation's changing economy, and the declining opportunity that exists in various careers. Many adults are finding themselves in situations where they have been trained in fields that are less desirable or marketable in today's economy than they were at the time that the career was originally planned. Some of these individuals would consider a career change, but because of family responsibilities or other circumstances, are not in a position to pursue the education necessary for a new career on a full-time basis. These individuals would likely welcome the opportunity to pursue the necessary education on a part-time basis. This option is likely to be fairly marketable, and a significant pool of additional qualified candidates could result from increasing efforts to promote this option.

3. Formal affiliation with undergraduate institutions

The majority of optometry students enter into their professional education having already acquired a bachelor's degree. However, no school requires a bachelor's degree as a requirement for admission, and all schools admit some students without the bachelor's degree. This situation introduces two additional avenues for "non-traditional" student recruitment through liaison with undergraduate institutions. These inter-institutional recruitment policies can be described as follows:

a. Students who are completing requirements for the bachelor's degree while in-route to the OD degree, with the bachelor's degree being conferred by the undergraduate institution.

This option can best be accomplished through formal liaison between the optometric and undergraduate institutions, such that certain negotiated courses taught in the professional curriculum also are counted toward fulfillment of the bachelor's degree requirement. When an institutional relationship of this type is in place and advertised, students will be attracted to both the participating undergraduate institution and subsequently to the optometry school, aiding

recruitment efforts of both institutions.

b. Recruitment of students directly out of high school, with seats in the entering class being reserved for those students once they fulfill the necessary undergraduate qualifications.

This is a more binding and innovative approach to institutional liaison between an undergraduate institution and an optometry school. In this concept, talented high school graduates would be recruited to the participating undergraduate institution with the specific intent of the students attending that institution in order to prepare for an optometric education, as well as to receive a quality undergraduate liberal arts education. The participating students, upon entering the freshman year in college, would be guaranteed a seat in the participating optometry school following completion of undergraduate prerequisites, and provided that various negotiated conditions of admission were met. As with the previous example, a relationship of this type between undergraduate institutions and optometry schools can serve to augment the optometry school applicant pool. With the number of applications down, it behooves the schools and colleges of optometry to develop innovative recruitment policies such as those described that attract qualified applicants and put optometric educational opportunities into the grasp of those seeking it.

Summary and Conclusions

There has been a serious decline in the pool of applicants applying to schools and colleges of optometry. Many of the reasons have been delineated above, and do not show signs of abatement. This decline has caused many optometric educators and leaders in the profession to become concerned with the quality of the students being admitted to the schools and colleges. As the "applicant-to-admission ratio" declines it becomes obvious that students with poorer credentials will be admitted into the programs if the schools and colleges attempt to maintain their enrollments. The manpower projections described above are predicated on the number of individuals admitted into the schools and colleges of optometry remaining about constant.

The data presented argue forcefully for increased and aggressive optometric student recruitment. The schools and colleges of optometry, feeling the brunt of the declining applicant pool, have responded by placing greater emphasis and financial resources into their student recruitment activities. ASCO has responded with additional recruitment activities intended to support the individual recruitment activities of the schools and colleges.

One of the areas identified as needing substantial improvement is the recruitment of Black Americans, Hispanics and Native American Indians. These discrete minority groups continue to be underrepresented in the optometric profession in proportion to their numbers in the general population. Current enrollment of students in schools and colleges of optometry suggests some modest increases in the proportion of individuals from these minority groups, but the data suggest need for substantial improvement. The data indicate the greatest need to be in the area of recruitment of Black Americans. Optometry must strive to attract greater numbers of students from these underrepresented minority groups into the optometric profession. Attracting a greater number of minorities will require improved optometric visibility in urban inner cities and other communities where members of these minority groups are largely represented. Optometric student recruitment programs must be developed that will attract minority students, and mechanisms must be developed to make these recruitment materials and resources available to institutions where qualified minority students are in attendance. Furthermore, mechanisms must be found to help finance an optometric education for students who are economically disadvantaged. Lastly, the profession should organize financial management seminars designed to help educate minority students to the financial realities in health care, and options available to obtain the necessary financial assistance to obtain a contemporary doctoral-level health education, and to develop effective strategies for meeting these educational expenses.

Optometry is a young, growing profession. It has persevered and in fact prospered in the face of enormous adversity. Today, many of the profession's most aggressive and talented leaders are relatively young, having been graduated from an optometry school or college within the last 20 years. It is this crop of young, dynamic optometrists that will determine the future of the profession. If the growth and prosperity the profession has enjoyed in its past is to continue, it will be the result of the next generation of talented, forward-thinking students. The profession and its future is completely dependent upon the quality of the individuals that are added to its ranks. To ensure a healthy profession for the next generation of practitioners, the optometry schools and colleges must maintain rigorous admission standards, and must continue to attract highly qualified applicants to fill their classes. Innovative recruitment efforts such as those described above are necessary to ensure there will be no compromise in the quality of students ultimately admitted into the professional programs. Of equal importance, optometrists must continue to serve the schools and colleges as they have in past years by attracting the most talented students possible into optometric education. No charge to the profession can be considered more vital. □

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The Current State of Planning Activities at Schools and Colleges of Optometry

Michael H. Heiberger, O.D., M.A.

Introduction

Planning is not new. It is as old as civilization itself. The ancient Greeks, the Romans, the Chinese and the Incas of Peru planned. Throughout history planning was used in the creation of great cities as well as in social, political and economic development. Planning in higher education, particularly as it relates to management and strategic decision making, is a recent phenomenon. Colleges and universities really didn't get serious about planning until the 1970s.

David Ewing in his book, *Practice of Planning*,[1] utilizes the example of football to explain the need for planning:

"In football, a key step in the game is taken before the whistle is ever blown. It comes when the coaches review the game films of the coming opponent and the condition of their own team, and talk with the players about the strategy for the forthcoming contest. What kind of game should they expect? How should they try to play it?"

While liberal arts colleges and large universities need to know about and adapt to future change, schools which have only one major curriculum (e.g. schools of optometry) have a vital stake in knowing the future and making relatively quick institutional and academic decisions in order to survive it. Not only are schools and colleges of optometry affected by the same demographic factors that affect colleges and universities in general, they are also affected by changes sweeping the profession of optometry. Consequently, the nature and degree of planning that occurs within a school or college of optometry can determine how well that institution is equipped to meet and cope with change.

What is the status of planning at schools and colleges of optometry? While the schools' organization, ASCO, and the profession-at-large, through the AOA, have engaged in planning activities, there has been no published description of institution-wide planning at any school or college of optometry. During the summer of 1986, a survey of the chief administrative officers of each optometry school in the United States was conducted to determine the status of formal and informal planning activity at each institution.

Method

A questionnaire consisting of fourteen items was sent to the chief administrative officers of each of the U.S. schools of optometry. A cover letter explaining the purpose of the survey and inviting open-ended comments was included along with a postage paid return envelope. In addition, a page which defined the terms planning, long range planning, strategic planning and incremental planning was attached.

Responses were tabulated as a total for all respondents as well as separately for public and private institutions. This was somewhat arbitrary in that two university related schools, Pacific and Inter-American, were grouped with the private schools. Multiple responses were permitted and were tabulated.

Limited analysis by cross-tabulation was done for selected items which were hypothesized to have a dependent relationship.

Open-ended responses are reported verbatim.

Results

All sixteen U.S. schools and colleges of optometry responded to the questionnaire. Eleven of the sixteen schools indicated that a well-defined process of planning for the future was in place, three did not have such a process in place and two schools did not answer (see Figure 1). The public and private schools responded in about the same proportion. Three chief administrative officers used the comment section to indicate that a new planning process or a significant change in the current process was imminent. Their comments:

"We will not answer the rest of the questionnaire as we are only planning to plan."

"Changes in the procedure will no doubt occur when a new dean is hired."

"As new president of the College I am committed to planning as a means to developing a unified administration and strategic planning to position our institution to meet the needs of our College in the 21st century."

Seven of the nine public schools were participating in a campus-wide or university-wide planning activity. Twelve schools reported that planning occurs for the optometry school as an entity. This was true for all private schools but only for five of the nine public schools. Three schools (all public) carry out planning at the department or unit level. One dean described the planning activity at his institution.

"We do our planning in subsets. The dean does some, the curriculum com-

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Table I
QUESTIONNAIRE TO DETERMINE STATUS OF PLANNING

1. A WELL-DEFINED PLANNING PROCEDURE?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
YES	6	5	11
NO	1	2	3

2. HOW IS PLANNING CARRIED OUT?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Part of campus-wide or university-wide planning activity	7	0	7
For the optometry school as an entity	5	7	12
Carried out at the department or unit level within the optometry school	3	0	3

3. PLANNING ACTIVITY ENCOMPASSES THE FOLLOWING:

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Physical space and facilities	8	6	14
Academic and/or clinical programs	8	7	15
Recruitment, admissions and marketing	6	7	13
Faculty development	7	6	13
Student development	5	6	11

4. WHO PARTICIPATES IN THE PLANNING PROCESS?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Administration	8	7	15
Faculty	8	7	15
Students	6	6	12
Trustees	1	5	6
Alumni	7	4	11

5. TYPE OF PLANNING?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Long-range	6	2	8
Incremental	5	1	6
Strategic	5	7	12

(continued)

mittee does some and the campus requires some. The result is rational but not ideal."

Five areas of planning activities were identified in the survey and the majority of schools indicated that their planning included all of the areas. The highest response (15) was for academic and clinical program planning; the lowest for student development (11).

Administration and faculty are planning participants in fifteen of the schools. A majority of schools include alumni and students in the process while only six schools involve their trustees or board members. Five of these six are private schools.

While most schools reported that strategic planning was the type of planning carried out, ten of the sixteen schools reported at least two types of planning occurring simultaneously. The private schools all reported using strategic planning while only five of the nine public schools reported using this process. Incremental and long-range planning was more often employed by public schools.

Twelve schools reported that planning was linked to budgeting. In four schools, it was not. One school responded both "yes" and "no" on this item.

Nine of fourteen respondents indicated that planning began at their institution less than ten years ago and for four of the nine, the process began less than two years ago. Public schools seem to have been at it longer than private schools.

Informal planning is prevalent among administrators and faculty at most schools while only three chief administrative officers reported student involvement (all from public institutions) and only one reported board involvement in this activity.

Surprisingly, only ten respondents reported that a declining number of applicants has been a problem within the last ten years. Only seven schools report a decline in the academic quality of students. Severe budget cutbacks have been a problem at eight schools but only three have had to deal with retrenchment of faculty. One chief administrative officer offered this comment:

"Although the entering student grade point average is about the same, it is generally believed that today's student has more difficulty with the curriculum."

In most cases, schools report that plans are currently in place to deal with each of the problems they experienced. The survey did not ask, and perhaps should have, whether or not such plans

were in place when the problem occurred.

Chief administrators at six schools report that information pertinent to management decisions is always available to them. An additional seven report that information is usually available while one chief administrator says it is rarely available.

Planning consultants have been used by six schools. There is essentially no difference between public or private schools in the use of consultants for planning. One private school president reported using different consultants at different times:

"Our initial planning effort began in the late '70s. At the outset, it was long range (five year) planning. Our consultant was associated with the Johns Hopkins Center for University Planning. The current planning phase is strategic planning. Our consultant is a former vice president of Sperry Corporation."

Institutional research is a formalized effort at twelve institutions. This may relate to the response by chief administrators that, with one exception, management information is always or usually available.

Only seven of the chief administrative officers indicated an interest in learning more about planning activities at other optometry schools. Even lesser numbers were interested in the process as it occurs in other settings.

Cross-tabulation of questions 11 and 13 indicates an interesting difference between public and private institutions. All eight public school chief administrators responding to item 11 indicated that information pertinent to management decisions was always or usually available to them. In seven of those eight schools a formal institutional research effort existed. While six of the seven private school chief administrators indicated that information pertinent to management decisions was always or usually available, only three of the private schools had a formalized institutional research effort.

A cross-tabulation was performed between question 6, which asks whether or not planning and budgeting are linked, and the part of question 9 that inquires about whether or not the school has experienced severe budget cutbacks in the past ten years. Three of the eight institutions which reported that they did experience severe budget cutbacks also indicated that planning and budgeting processes are not linked. Of the five public institutions that experienced cutbacks, only one did not link planning and budgeting. Of the three private schools that reported severe

Table 1 (con't)

6. PLANNING PROCESS LINKED TO BUDGETING PROCESS?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Yes	*7	5	12
No	*2	2	4

*One school answered both yes and no

7. WHEN DID PLANNING PROCESS BEGIN?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Within the past 2 years	1	3	4
3 to 5 years ago	1	2	3
6 to 10 years ago	2	0	2
More than 10 years ago	3	2	5

8. INFORMAL PLANNING TAKES PLACE:

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Within the administrative structure	8	7	15
At faculty level	8	4	12
Within the budget process	5	7	12
Students	3	0	3
Board of Trustees	0	1	1

9. PROBLEMS WITHIN THE LAST TEN YEARS?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Declining number of applicants	5	5	10
Decline in academic quality of students	4	3	7
Severe budget cutbacks	5	3	8
Retrenchment of faculty	2	1	3

10. PLAN IN PLACE TO DEAL WITH:

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Declining number of applicants	5	4	9
Decline in academic quality of students	3	2	5
Severe budget cutbacks	6	2	8
Retrenchment of faculty	2	0	2

(continued)

Table 1 (con't)

11. IS INFORMATION PERTINENT TO MANAGEMENT DECISIONS READILY AVAILABLE TO YOU?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Always	3	3	6
Usually	4	3	7
Rarely	0	1	1

12. HAVE YOU EVER UTILIZED A PLANNING CONSULTANT?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Yes	3	3	6
No	5	4	9

13. DOES YOUR SCHOOL (OR PARENT CAMPUS) HAVE A FORMALIZED INSTITUTIONAL RESEARCH EFFORT?

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Yes	7	5	12
No	1	2	3

14. I WOULD BE INTERESTED IN LEARNING MORE ABOUT:

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
How to conduct a planning process	2	0	2
Planning at other optometry schools	2	5	7
Planning in higher education	1	1	2
Planning in schools of other professions	3	3	6

Table II
CROSS-TABULATION BETWEEN QUESTIONS 11 AND 13 INFORMATION AVAILABILITY / EXISTENCE OF INST. RESEARCH EFFORT

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Information always or usually available	8	6	14
Existence of a formalized institutional research effort	7	3	10
Percentage of schools where management information appears to be supported by institutional research	88%	50%	71%

budget cutbacks, two did not link the planning and budgeting processes.

Discussion

Formal planning in schools of optometry is a relatively recent phenomenon. In general, the public institutions have been involved in planning longer than have the private schools but the private schools are all involved in strategic planning while only about half of the public schools currently use this type of planning. This is understandable in light of the fact that private school budgets usually are directly dependent upon income. It is vital for a private school to be aware of a changing environment and to adapt quickly to it. This is the essence of strategic planning.

A significantly smaller percentage of private schools has ongoing institutional research efforts than do public schools. Regardless, six of the seven chief administrators representing the private schools feel that adequate management information is always or usually available to them. This apparent inconsistency suggests either that institutional data collection and analysis does go on at private schools, albeit under a different label, or that the chief administrators of these schools have sources of information unrelated to formal internal data collection.

While public institutions have generally been involved in planning longer than have private ones, the survey results suggest that this was largely due to involvement in overall university planning rather than planning specifically directed at the optometry school. The private schools, however, have adopted strategic planning in greater numbers than have the public schools.

Virtually all schools that reported experiencing a decline in quantity or quality of students, severe budget cuts or retrenchment of faculty also report involvement in one or another form of planning. It is not clear, however, from the survey whether or not the planning process was a reaction to the problem or a help in dealing with the problem.

In several instances, the comment section of the survey indicated that planning efforts were either started or renewed coincident with the appointment of a new dean or president. The degree to which a chief administrative officer is committed seems to have a direct effect on the degree to which others at the institution participate.

Formal planning processes at schools and colleges of optometry generally have broad involvement by all segments of the school community. In informal planning, however, the degree to which

Figure 1
SURVEY OF PLANNING ACTIVITIES
SCHOOLS AND COLLEGES OF OPTOMETRY

For each question, please check *all* responses that apply. If question does not apply to your situation, leave blank.

1. At the present time, my school uses a well-defined procedure to plan for its future.

   ___Yes ___No

2. The regular formalized planning activity (see last page for definition) is carried out as:

   ___part of a university-wide or campus-wide planning activity
   ___a formalized process for the school of optometry as a separate entity
   ___a formalized process carried out at the departmental or unit level within the school of optometry

3. The planning activity encompasses the following:

   ___physical space and facilities
   ___academic and/or clinical programs
   ___recruitment, admissions and marketing
   ___faculty development
   ___student development

4. The following are participants in our planning process:

   ___administration
   ___faculty
   ___students
   ___trustees
   ___alumni

5. The type of planning engaged in may be categorized as (see last page for definitions):

   ___long-range planning
   ___incremental planning
   ___strategic planning
   ___other _____

6. The planning process is linked to the budget process.

   ___Yes ___No

7. Our formal planning process began in _____ (year)

8. In addition to any formal planning process which may or may not be in place, informal planning takes place:

   ___within the administrative structure
   ___at the faculty level
   ___within the budget process
   ___other _____

9. Within the past ten years, has your school experienced any of the following?

   ___Declining number of applicants
   ___Decline in academic quality of students
   ___Severe budget cutbacks
   ___Retrenchment of faculty

10. Does your school currently have a plan to deal with:

    ___Declining number of applicants
    ___Decline in academic quality of students
    ___Severe budget cutbacks
    ___Retrenchment of faculty

11. Is information pertinent to management decisions readily available to you?

    ___Always
    ___Usually
    ___Rarely
    ___Never

12. Whether or not you currently have a planning process in place, have you ever utilized a planning consultant?

    ___Yes ___No

13. Does your school (or parent campus) have a formalized institutional research effort?

    ___Yes
    ___No
    ___Don't know

14. I would be interested in learning more about:

    ___how to conduct a planning process
    ___the planning activity at other optometry schools
    ___planning in higher education
    ___planning in schools of other professions

Name of School _____

Name of person responding _____

Comments:

Figure 2
DEFINITIONS (for Questions 1 & 5)

Formalized Planning Activity—A planning process which is carried out according to a clearly defined procedure and on a regular basis. Examples include:

Long Range Planning. A process by which an institution develops a written plan for its growth and development over a finite period (usually five or more years) and attempts to follow that plan until the time comes for the next long-range plan to be developed.

Strategic Planning. A process by which an institution positions itself to either take advantage of or protect itself from external or internal factors in its environment in order to carry out its mission. Such a process is usually a continuous one.

Incremental Planning. A process by which an institution develops plans to deal with specific problems as they arise.

Table III
CROSS-TABULATION BETWEEN QUESTIONS 6 AND 9C
SEVERE BUDGET CUTBACKS / PLANNING AND BUDGETING LINKED

	PUBLIC (N = 9)	PRIVATE (N = 7)	TOTAL (N = 16)
Severe Budget Cuts	5	3	8
Planning and Budgeting:			
Linked	4	1	5
Not linked	1	2	3
Percentage of schools with severe budget cutbacks where planning and budgeting are linked	80%	33%	63%

students, trustees and support staff are involved decreases markedly; notwithstanding that the process is common across all institutions.

While planning and budgeting are very different processes, when planning reaches the implementation stage a link to budgeting is vital. It is, therefore, difficult to understand why four schools (25% of the total) reported that the two processes were not linked. Three of these four also reported that they had experienced severe butget cutbacks. Planning in a period of diminished resources may be more important than planning in a period of increasing budgetary support.

Conclusion

The other speakers have outlined some of the issues and made some predictions about what the future holds for optometric education. It is clear that we face serious problems as well as myriad opportunities. At issue is whether or not each institution has a process by which it can continuously monitor the world around it, optometric and otherwise, and reconcile perceived changes with its own mission and goals.

While it would be foolhardy for an individual school not to utilize the results of national planning activity (such as occurs through ASCO, AOA or others), it would be a mistake to be limited to this type of planning alone. No two schools necessarily share the same mission and goals nor are they necessarily beset by the same constraints. Local or regional factors may be more or, at least, equally as important as national trends.

In summary, the future of optometric education and of the profession of optometry is dependent on innovative and visionary planning and skillful implementation of the changes indicated by the planning process. It is vital for each school to encourage its faculty, administration and students to keep in touch with what is happening and what is likely to happen that will affect optometric education. We must all be constant observers of our external and internal environments. In the words of the immortal Yogi Berra, "You can observe a lot just by watching." □

References

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A Summary Response

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Demographics

While the national population continues to increase, such increase is not uniform as to age, race or geography. It is this lack of uniformity that is key to optometry's interest. Popularion shifts within the United States continue toward the South and Southwest. Increases are noted in California, Texas and Florida; decreases are noted in Indiana, Iowa, Michigan and Ohio. It is well to note that the impact on schools of optometry may well be that institutions in the West/Southwest will need to gear up for increased demands for graduates while those serving the Indiana, Iowa, Michigan and Ohio areas will need to gear down due to a decreased demand.

Some of this geographic shift is likely due to individuals living longer and migrating to sunbelt areas as part of retirement. This increases the absolute population numbers in these particular regions, which, in turn places a basic increased demand on all health care services. Of equal importance is the realization that this shifting population is the very group (as to age) that consumes the greatest amount of health

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